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RAW SEQUENCE LISTING

DATE: 12/09/2003

PATENT APPLICATION: US/09/546,201A

TIME: 10:52:48

Input Set : N:\Cr4\12042003\I546201.raw

Output Set: N:\CRF4\12092003\I546201A.raw

1 <110> APPLICANT: POLO, John M
 2 DUBENSKY JR., Thomas W
 3 BELLI, Barbara A
 4 PERRI, Silvia
 5 FONG, Timothy C
 6 <120> TITLE OF INVENTION: ENHANCEMENT OF THE IMMUNE RESPONSE FOR VACCINE AND GENE
 THERAPY
 7 APPLICATIONS
 8 <130> FILE REFERENCE: 2300-1463 (PP01463.002)
 9 <140> CURRENT APPLICATION NUMBER: US/09/546,201A
 10 <141> CURRENT FILING DATE: 2000-04-10
 11 <150> PRIOR APPLICATION NUMBER: 60/128,409
 12 <151> PRIOR FILING DATE: 1999-04-08
 13 <160> NUMBER OF SEQ ID NOS: 70
 14 <170> SOFTWARE: PatentIn version 3.2
 16 <210> SEQ ID NO: 1
 17 <211> LENGTH: 434
 18 <212> TYPE: DNA
 19 <213> ORGANISM: Artificial
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 22 <220> FEATURE:
 23 <221> NAME/KEY: misc_feature
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 25 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
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 29 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
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 33 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
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 36 <222> LOCATION: (50)..(89)
 37 <223> OTHER INFORMATION: complementary sequence for the hammerhead ribozyme
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 41 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
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 43 <221> NAME/KEY: misc_feature
 44 <222> LOCATION: (67)..(69)

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Input Set : N:\CrF4\12042003\I546201.raw

Output Set: N:\CRF4\12092003\I546201A.raw

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46 <220> FEATURE:
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48 <222> LOCATION: (99)..(101)
49 <223> OTHER INFORMATION: starting Met
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52 <222> LOCATION: (177)..(179)
53 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
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56 <222> LOCATION: (303)..(305)
57 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
58 <220> FEATURE:
59 <221> NAME/KEY: misc_feature
60 <222> LOCATION: (378)..(380)
61 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
62 <220> FEATURE:
63 <221> NAME/KEY: misc_feature
64 <222> LOCATION: (418)..(418)
65 <223> OTHER INFORMATION: target sequences for both hammerhead and hairpin ribozymes
66 <220> FEATURE:
67 <221> NAME/KEY: misc_feature
68 <222> LOCATION: (420)..(422)
69 <223> OTHER INFORMATION: target sequences for both hammerhead and hairpin ribozymes
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73      tgcgcccgtg gctggaggag cagataaact ccaacacgat cccggggctc aagtggctta      180
74      acaaggaaaa gaagattttt cagatcccct ggatgcatgc ggctagacat ggggtgggatg      240
75      tggaaaaaga tgcaccactc tttagaaacc gggcaatcca tacaggaaag catcaaccag      300
76      gagtagataa acctgatccc aaaacatgga aggcgaattt cagatgcgcc atgaattcct      360
77      tgcctgatat tgaagaagtc aaggataaaa gcataaagaa aggaaataat gccttcaggg      420
78      tctaccgaat gctg                                     434
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81 <211> LENGTH: 376
82 <212> TYPE: DNA
83 <213> ORGANISM: Artificial
84 <220> FEATURE:
85 <223> OTHER INFORMATION: YY1
86 <220> FEATURE:
87 <221> NAME/KEY: misc_feature
88 <222> LOCATION: (113)..(115)
89 <223> OTHER INFORMATION: target sequences for hammerhead ribozyme
90 <220> FEATURE:
91 <221> NAME/KEY: misc_feature
92 <222> LOCATION: (128)..(130)
93 <223> OTHER INFORMATION: target sequences for hammerhead ribozyme
94 <220> FEATURE:

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96 <222> LOCATION: (140)..(142)
97 <223> OTHER INFORMATION: target sequences for hammerhead ribozyme
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100 <222> LOCATION: (144)..(146)
101 <223> OTHER INFORMATION: target sequences for hammerhead ribozyme
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104 <222> LOCATION: (173)..(178)
105 <223> OTHER INFORMATION: target sequences for hammerhead ribozyme
106 <220> FEATURE:
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108 <222> LOCATION: (228)..(266)
109 <223> OTHER INFORMATION: complementary sequence for the hammerhead ribozyme
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112 <222> LOCATION: (234)..(236)
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116 <222> LOCATION: (241)..(243)
117 <223> OTHER INFORMATION: starting Met
118 <220> FEATURE:
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120 <222> LOCATION: (246)..(248)
121 <223> OTHER INFORMATION: target sequences for a chosen ribozyme
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123 <221> NAME/KEY: misc_feature
124 <222> LOCATION: (259)..(261)
125 <223> OTHER INFORMATION: target sequences for hammerhead ribozyme
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129      ccgcccgtc gccgccttc tccctctgcc ttccttcccc acggccggcc gcctctctgc      180
130      ccgcccgccc gcagccgagg agccgaggcc gccgcgggcg tggcgggcga gccctcagcc      240
131      atggcctcgg gcgacaccct ctacatcgcc acggacggct cggagatgcc ggccgagatc      300
132      gtggagctgc acgagatcga ggtggagacc atcccgttg agaccatcga gaccacagtg      360
133      gtgggcgagg aggagg                                     376
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137 <212> TYPE: DNA
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139 <220> FEATURE:
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141 <220> FEATURE:
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143 <222> LOCATION: (16)..(18)
144 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme

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145 <220> FEATURE:
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148 <223> OTHER INFORMATION: starting Met
149 <220> FEATURE:
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151 <222> LOCATION: (39)..(41)
152 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
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155 <222> LOCATION: (53)..(55)
156 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
157 <220> FEATURE:
158 <221> NAME/KEY: misc_feature
159 <222> LOCATION: (61)..(63)
160 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
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162 <221> NAME/KEY: misc_feature
163 <222> LOCATION: (100)..(138)
164 <223> OTHER INFORMATION: complementary sequence of the hairpin ribozyme
165 <220> FEATURE:
166 <221> NAME/KEY: misc_feature
167 <222> LOCATION: (103)..(107)
168 <223> OTHER INFORMATION: target sequence for a chosen ribozyme
169 <220> FEATURE:
170 <221> NAME/KEY: misc_feature
171 <222> LOCATION: (103)..(103)
172 <223> OTHER INFORMATION: target sequence for both hammerhead and hairpin ribozymes
173 <220> FEATURE:
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175 <222> LOCATION: (105)..(107)
176 <223> OTHER INFORMATION: target sequence for both hammerhead and hairpin ribozymes
177 <220> FEATURE:
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180 <223> OTHER INFORMATION: target sequence for both hammerhead and hairpin ribozymes
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183 <222> LOCATION: (234)..(236)
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187      gtcctcctga ctggggtgag ggccagccca ggccagggca cccagtctga gaacagctgc      120
188      acccacttcc caggcaacct gcctaacatg cttcgagatc tccgagatgc cttcagcaga      180
189      gtgaagactt tctttcaa at gaaggatcag ctggacaact tggttgtaaa ggagtccttg      240
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192 <210> SEQ ID NO: 4
193 <211> LENGTH: 296
194 <212> TYPE: DNA

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Input Set : N:\Crf4\12042003\I546201.raw

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195 <213> ORGANISM: Artificial
196 <220> FEATURE:
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204 <222> LOCATION: (24)..(26)
205 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
206 <220> FEATURE:
207 <221> NAME/KEY: misc_feature
208 <222> LOCATION: (28)..(30)
209 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
210 <220> FEATURE:
211 <221> NAME/KEY: misc_feature
212 <222> LOCATION: (33)..(35)
213 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
214 <220> FEATURE:
215 <221> NAME/KEY: misc_feature
216 <222> LOCATION: (50)..(52)
217 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
218 <220> FEATURE:
219 <221> NAME/KEY: misc_feature
220 <222> LOCATION: (98)..(100)
221 <223> OTHER INFORMATION: starting Met
222 <220> FEATURE:
223 <221> NAME/KEY: misc_feature
224 <222> LOCATION: (101)..(103)
225 <223> OTHER INFORMATION: target sequence for hammerhead ribozyme
226 <220> FEATURE:
227 <221> NAME/KEY: misc_feature
228 <222> LOCATION: (123)..(159)
229 <223> OTHER INFORMATION: complementary sequence of the hairpin ribozyme
230 <220> FEATURE:
231 <221> NAME/KEY: misc_feature
232 <222> LOCATION: (126)..(130)
233 <223> OTHER INFORMATION: target sequence for a chosen ribozyme
234 <220> FEATURE:
235 <221> NAME/KEY: misc_feature
236 <222> LOCATION: (126)..(126)
237 <223> OTHER INFORMATION: target sequence for both hammerhead and hairpin ribozymes
238 <220> FEATURE:
239 <221> NAME/KEY: misc_feature
240 <222> LOCATION: (128)..(130)
241 <223> OTHER INFORMATION: target sequence for both hammerhead and hairpin ribozymes
242 <220> FEATURE:
243 <221> NAME/KEY: misc_feature

RAW SEQUENCE LISTING ERROR SUMMARY
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Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 6,65,69
Seq#:3; Line(s) 172,176,180,184
Seq#:4; Line(s) 237,241
Seq#:25; Line(s) 446

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27
Seq#:28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51
Seq#:52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70

VERIFICATION SUMMARY

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Input Set : N:\Crf4\12042003\I546201.raw

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